

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-216221
 (43)Date of publication of application : 10.08.1999

(51)Int.Cl. A63F 5/04
 A63F 7/02
 A63F 9/00

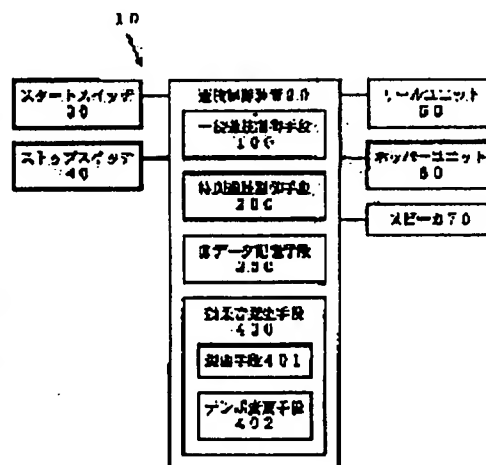
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(54) SLOT MACHINE

(57)Abstract:

PROBLEM TO BE SOLVED: To change the tempo of effective sound with the progress of a game, especially, concerning a slot machine.

SOLUTION: A music data storage means 300 includes a melody data storage means and a tempo data storage means. The melody data storage means stores melody data of effective sound and the tempo data storage means stores tempo data of effective sound. An effective sound generating means 400 includes a tempo changing means 402. The tempo changing means 402 adds change to tempo data which is stored in the tempo data storage means in accordance with the progress of the game so as to change the tempo of effective sound.



LEGAL STATUS

[Date of request for examination] 03.10.2000
 [Date of sending the examiner's decision of rejection] 22.04.2004
 [Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's
decision of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

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CLAIMS

[Claim(s)]

[Claim 1] In a slot machine including the music data storage means for memorizing the music data for generating a sound effect, and the sound effect generating means for reading said music data memorized by said music data storage means, and generating said sound effect The melody data storage means for memorizing the melody data of said sound effect for said music data storage means, The II Tempo data storage means for memorizing the II Tempo data of said sound effect is included. For said sound effect generating means The slot machine characterized by adding modification to said II Tempo data memorized by said II Tempo data storage means with advance of a game, and including the II Tempo modification means for changing II Tempo of said sound effect.

[Claim 2] In said general game performed in said slot machine by the general game control means and said general game control means for making a general game perform A special game with a winning-a-prize probability higher than said general game is made to start by having attained predetermined conditions. In order to make the specific game of a predetermined count perform into the special game concerned, a game control means is included specially. To said special game control means The count count means of a specific game for counting the count of said specific game in said special game is included. Said II Tempo modification means The slot machine according to claim 1 characterized by adding modification to said II Tempo data memorized by said II Tempo data storage means based on the counted value counted for said count count means of a specific game, and trying to change II Tempo of said sound effect.

[Claim 3] It is the slot machine according to claim 2 characterized by the count of said specific game counted with said count count means of a specific game being a count of the general game in a big bonus game, and trying for the count of said general game in said big bonus game to change said II Tempo modification means so that the II Tempo rise of said sound effect may be carried out, on condition that the count of termination of said predetermined count is approached.

[Claim 4] The count of said specific game counted with said count count means of a specific game It is the count of the accessory game for competing for success in an election and un-winning. Said II Tempo modification means [of the specific accessory in a regular bonus game] The slot machine according to claim 2 or 3 characterized by trying to make it change so that the count of said accessory game in said regular bonus game may carry out the II Tempo rise of said sound effect, on condition that the count of termination of said predetermined count is approached.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention enables it to change II Tempo of a sound effect especially with advance of a game about a slot machine.

[0002]

[Description of the Prior Art] Conventionally, the music data of a sound effect were memorized on this kind of slot machine. A melody and II Tempo were memorized in one by the above-mentioned conventional music data.

[0003]

[Problem(s) to be Solved by the Invention] However, by the above-mentioned conventional music data, when it is going to change II Tempo of a sound effect, two or more music data with which II Tempo differs must be prepared, and there is a trouble that data volume will increase. Then, the place which each invention indicated by each claim, respectively is made in view of the trouble which the above-mentioned Prior art has, and is made into the purpose is in the following point.

(Claim 1) That is, invention according to claim 1 memorizes the melody of music data, and II Tempo separately, and enables it to change only II Tempo with advance of a game.

[0004] Therefore, by changing only the II Tempo data among music data, II Tempo of a sound effect can be changed and data volume can be decreased.

(Claim 2) In addition to the purpose of the above-mentioned invention according to claim 1, invention according to claim 2 aims at the following point.

[0005] That is, invention according to claim 2 enables it to change II Tempo of a sound effect with advance of a game specially. For this reason, presence can be specially improved with advance of a game.

(Claim 3) In addition to the purpose of the above-mentioned invention according to claim 2, invention according to claim 3 aims at the following point.

[0006] That is, invention according to claim 3 enables it to carry out the II Tempo rise of the sound effect because the count of the general game in a big bonus game progresses. For this reason, presence can be gradually heaped up as a big bonus game approaches in the end. Moreover, since a game person understands that a big bonus game approaches in the end, a game person's feeling of impatience can be instigated.

(Claim 4) In addition to the purpose of the above-mentioned invention according to claim 2 or 3, invention according to claim 4 aims at the following point.

[0007] That is, invention according to claim 4 enables it to carry out the II Tempo rise of the sound effect because the count of the general game in a regular bonus game progresses. For this reason, presence can be gradually heaped up as a regular bonus game approaches in the end.

[0008] Moreover, since a game person understands that a regular bonus game approaches in the end, a game person's feeling of impatience can be instigated.

[0009]

[Means for Solving the Problem] (Focus) Each invention indicated by each claim, respectively is made in order to attain each above-mentioned purpose, and it explains the focus of each invention below using the gestalt of implementation of invention shown in the drawing.

[0010] In addition, the sign in a parenthesis shows the sign used in the gestalt of implementation of invention, and does not limit the technical range of this invention. Moreover, a drawing number also shows the drawing number used in the gestalt of implementation of invention, and does not limit the technical range of this invention.

(Claim 1) Invention according to claim 1 is characterized by the following two points.

[0011] As shown in a music data storage means (300) at drawing 3, the following means (301,302) is included in the 1st.

(1) A melody data storage means (301) melody data storage means (301) is for memorizing the melody data of a sound effect.

[0012] (2) The Il Tempo data storage means (302) Il Tempo data storage means (302) is for memorizing the Il Tempo data of a sound effect. As shown in a sound effect generating means (400) at drawing 1, the following means (402) is included in the 2nd.

[0013] (1) An Il Tempo modification means (402) Il Tempo modification means (402) is for adding modification to the Il Tempo data memorized by the Il Tempo data storage means (302) with advance of a game, and changing Il Tempo of a sound effect.

(Claim 2) In addition to the focus of the above-mentioned invention according to claim 1, invention according to claim 2 is characterized by the following three points.

[0014] As shown in drawing 1, the following means (100,200) is included [1st] in the slot machine.

(1) A general game control means (100) general game control means (100) is for making a general game perform.

(2) specially -- a game control means (200) -- it is for making a game control means (200) start the high special game of a winning-a-prize probability from a general game by having attained predetermined conditions in the general game performed by the general game control means (100) specially, and making the specific game of a predetermined count perform into the special game concerned.

[0015] Specially, as shown in a game control means (200) at drawing 2, the following means (230,250) is included in the 2nd.

(1) It is for counting the count of the specific game in a game specially for the count count means (230,250) of the count count means (230,250) specification game of a specific game.

[0016] the Il Tempo data memorized by the Il Tempo data storage means (302) the 3rd based on the counted value which counted the Il Tempo modification means (402) for the count count means (230,250) of a specific game -- modification -- in addition, he is trying to change Il Tempo of a sound effect

(Claim 3) In addition to the focus of the above-mentioned invention according to claim 2, invention according to claim 3 is characterized by the following two points.

[0017] The count of the specific game counted with the count count means (230) of a specific game to the 1st is a count of the general game in a big bonus game. He is trying to change an Il Tempo modification means (402) to the 2nd so that the count of the general game in a big bonus game may carry out the Il Tempo rise of the sound effect, on condition that the count of termination of a predetermined count is approached.

(Claim 4) In addition to the focus of the above-mentioned invention according to claim 2 or 3, invention according to claim 4 is characterized by the following two points.

[0018] The count of the specific game counted with the count count means (250) of a specific game to the 1st is a count of the accessory game for competing for success in an election and un-winning. [of the specific accessory in a regular bonus game] He is trying to change an Il Tempo modification means (402) to the 2nd so that the count of the accessory game in a regular bonus game may carry out the Il Tempo rise of the sound effect, on condition that the count of termination of a predetermined count is approached.

[0019]

[Embodiment of the Invention] (Explanation of a drawing) Drawing 1 -7 show an example of the gestalt of operation of this invention. Drawing 1 -3 show the block diagram of a slot machine, respectively, and drawing 1 shows the block diagram in which a block diagram and drawing 2 show the block diagram of drawing 1 showing the detail of a game control means specially, and drawing 3 shows the detail of the music data storage means of drawing 1 , respectively.

[0020] Drawing 4 -7 show the flow chart for explaining actuation of a slot machine, respectively, and a flow chart for the flow chart with which drawing 4 follows the Maine flow chart and drawing 5 follows B of drawing 4 , and drawing 6 to explain song selection processing of drawing 4 , and drawing 7 show the flow chart for explaining rhythm processing of drawing 5 , respectively.

(Slot machine) Ten show a slot machine among a Fig.

[0021] The above-mentioned slot machine 10 is constituted centering on the game control unit 20, as shown in drawing 1 . Although the above-mentioned game control unit 20 is not illustrated, it is having been constituted focusing on CPU, having ROM, RAM, I/O, etc., and reading the program memorized by ROM, and functions as various kinds of means 100-402 to mention later.

(Input stage) As shown in drawing 1 , the following switches 30-40 are connected to the input stage of said game control device 20.

[0022] (1) Although the start switch 30 start switch 30 is not illustrated, it is for making a game start, on condition that an injection of a medal. Although it will not specifically illustrate if the start switch 30 is operated, rotations of three reels are started all at once two or more. In addition, an injection of a medal actually throws in a game medal, and also it throws in the credit medal by which the credit was carried out into the slot machine 10, or replaces it with a medal, reads the information on cards magnetically or optically, and is good as a start condition of a game.

[0023] Although not illustrated, two or more patterns are displayed on each three above-mentioned reel, respectively.

(2) Although the stop switch 40 stop switch 40 is not illustrated, it is formed three pieces respectively corresponding to three reels, and stops rotation of each reel concerned. If one stop switch 40 is operated among three stop switches 40, specifically, rotation of the one corresponding reel concerned will stop. And actuation of all three stop switches 40 stops all of rotation of three reels.

(Output stage) As shown in drawing 1 , the following components 50-70 are connected to the output stage of said game control unit 20.

[0024] (1) The reel unit 50 reel unit 50 rotates and stops three reels according to an individual. Although the reel unit 50 does not illustrate, specifically, it consists of a motor respectively corresponding to three reels, for example, three stepping motors, those drive circuits, etc.

[0025] And if the start switch 30 is operated on condition that an injection of a medal, the drive of three motors will be started and rotation of three reels will be started. Next, if one of three stop switches 40 is operated, the drive of one corresponding motor will be stopped and the reel concerned will stop. Furthermore, if all three stop switches 40 are operated, the drive of all three motors will be stopped and all three reels will be suspended.

[0026] (2) The hopper unit 60 hopper unit 60 pays out a game person a medal based on the result of a game. In addition, without paying out a medal for every game, in a slot machine 10, the credit of the medal is carried out, or it is replaced with expenditure of a medal, and you may make it memorize magnetically or optically on cards the information which corresponds in the number of sheets of a medal.

[0027] (3) Loudspeaker 70 loudspeaker 70 generates a sound effect.

(Game control unit 20) The game control unit 20 includes the following means 100-400, as shown in drawing 1 .

(1) General game control means 100(2) special game control means 200 (3) The music data storage means 300(4) sound-effect generating means 400 (general game control means 100) general game control means 100 is a means for making a general game perform.

(Specially game control means 200) The game control means 200 is by having attained predetermined conditions in the general game performed by the general game control means 100 for making the high

special game of a winning-a-prize probability start, and making the specific game of a predetermined count perform into the special game concerned from a general game specially.

[0028] When it divides roughly, there are a big bonus game and a regular bonus game in the above-mentioned special game. Although the above-mentioned regular bonus game is not illustrated in a general game or a big bonus game, if three regular bonus patterns, for example, the pattern of a "bar", gather on effective Rhine, it will be started and the medal of 15 sheets will pay it out by the hopper unit 60 at this time.

[0029] Initiation of a regular bonus game starts the accessory game which used for three Replay patterns to gather, for example as the accessory and which competes for success in an election and un-winning.

[of an accessory] The count of max of an accessory game is set as 12 times. If for example, three replay patterns gather in the 12 above-mentioned times of accessory games, it will be success in an election of an accessory, and the medal of 15 sheets will pay out by the hopper unit 60.

[0030] The count of max of success in an election of the above-mentioned accessory is set as 8 times. On the other hand, although a big bonus game is not illustrated in a general game, if three big bonus patterns, for example, the pattern of "7", gather on effective Rhine, it will be started and the medal of 15 sheets will pay it out by the hopper unit 60 at this time. If a regular bonus game is started, a general game is started and the count of max of a general game is set as 30 times.

[0031] The regular bonus game previously explained that three replay patterns gather among 30 times in a big bonus game of general games is started, and the medal of five sheets pays out by the hopper unit 60 at this time. The count of max of the regular bonus game in a big bonus game is set as 3 times.

[0032] On the other hand, if the above-mentioned special game control means 200 is divided roughly as shown in drawing 2 , it includes the big bonus control means 210 and the regular bonus control means 220.

(Big bonus control means 210) The above-mentioned big bonus control means 210 is for controlling the big bonus game as a game specially, as explained previously.

[0033] And if the big bonus control means 210 is divided roughly as shown in drawing 2 , it includes the count count means 230 of a specific game, and RB winning-a-prize probability setting means 240. If the above-mentioned count count means 230 of a specific game is divided roughly as shown in drawing 2 , it includes the count count means 231 of a general game, and the count count means 232 of RB winning a prize. The above-mentioned count count means 231 of a general game is for counting the count of the general game as a specific game in a big bonus game, and has set the count of max as 20 times.

[0034] Said count count means 232 of RB winning a prize is for counting the count of the regular bonus game in a big bonus game, and has set the count of max as 3 times. Said RB winning-a-prize probability setting means 240 is for changing the winning-a-prize probability of the regular bonus in a big bonus game into a low probability.

(Regular bonus control means 220) On the other hand, the regular bonus control means 220 is for controlling the regular bonus game as a game specially, as explained previously.

[0035] If the regular bonus control means 220 is divided roughly as shown in drawing 2 , it includes the count count means 250 of a specific game, and the accessory success-in-an-election probability setting means 260. If the above-mentioned count count means 250 of a specific game is divided roughly as shown in drawing 2 , it includes the count count means 251 of an accessory game, and the count count means 252 of accessory success in an election. The above-mentioned count count means 251 of an accessory game is for counting the count of the accessory game as a specific game in a regular bonus game, and has set the count of max as 12 times.

[0036] Said count count means 252 of accessory success in an election is for counting the count of success in an election of the accessory in a regular bonus game, and has set the count of max as 8 times. Said accessory success-in-an-election probability setting means 260 is for changing the success-in-an-election probability of the accessory in a regular bonus game into a low probability.

(Music data storage means 300) Said music data storage means 300 is for memorizing the music data for generating a sound effect.

[0037] As shown in drawing 3 , the following storage means 301-311 are included in said music data

storage means 300.

(1) The melody data storage means 301 melody data storage means 301 is for memorizing the melody data for specifying the melody of a sound effect, and two or more kinds of melody data are memorized.

[0038] (2) The Il Tempo data storage means 302 Il Tempo data storage means 302 is for memorizing the Il Tempo data for specifying Il Tempo of a sound effect, and two or more kinds of Il Tempo data with which rates differed are memorized.

(3) The song selection data storage means 303 song-selection data storage means 303 is for memorizing the song selection data for selecting a song in one melody data in all to advance of a game from two or more kinds of melody data memorized by the melody data storage means 301.

[0039] (4) The musical interval data storage means 304 for musical interval data storage means 304 rhythms for rhythms is for memorizing the musical interval data for rhythms for specifying the musical interval for rhythms at the time of playback of the melody data which selected the song.

(5) The Keown data storage means 305 Keown data storage means 305 is for memorizing the key-on data for specifying the timing at the time of playback of the melody data which selected the song which acts as Keown.

[0040] (6) The musical instrument data storage means 306 musical-instrument data storage means 306 is for memorizing the musical instrument data for specifying the musical instrument at the time of playback of the melody data which selected the song.

(7) The timer data storage means 307 timer data storage means 307 is for memorizing the timer data for specifying the playback time amount of the melody data which selected the song.

[0041] (8) The tone data storage means 308 tone data storage means 308 is for memorizing the tone data for specifying the tone at the time of playback of the melody data which selected the song.

(9) The key off data storage means 309 key off data storage means 309 is for memorizing the key off data for specifying the timing at the time of playback of the melody data which selected the song which carries out key-off.

[0042] (10) The repeat data storage means 310 repeat data storage means 310 is for memorizing the repeat data for specifying the repeat at the time of playback of the melody data which selected the song.

(11) And the data storage means 311 and the data storage means 311 are for memorizing data, in order to specify the time of termination of playback of the melody data which selected the song.

(Sound effect generating means 400) Said sound effect generating means 400 is for reading the various data memorized by the music data storage means 300, and generating a sound effect through a loudspeaker 70.

[0043] The sound effect generating means 400 includes the song selection means 401 and the Il Tempo modification means 402, as shown in drawing 1. The above-mentioned song selection means 401 is for selecting a song in one melody data in all to advance of a game, reproducing the melody data concerned which selected the song, and making it generate as a sound effect through a loudspeaker 70 based on the song selection data memorized by the song selection data storage means 303 from two or more kinds of melody data memorized by the melody data storage means 301.

[0044] Said Il Tempo modification means 402 is for changing Il Tempo at the time of playback of the melody data which added modification and selected the song with advance of a game to the Il Tempo data memorized by the Il Tempo data storage means 302. With the gestalt of this operation, Il Tempo of those sound effects is changed in the special game of a big bonus game or a regular bonus game.

[0045] For example, the inside of a big bonus game is carrying out the Il Tempo rise of the sound effect, if the counted value of the count count means 231 of a general game amounts to 20 times. Furthermore, if the counted value of the count count means 231 of a general game amounts to 25 times, it is carrying out the Il Tempo rise of the sound effect further. In addition, if the timing of the Il Tempo rise is not only for 20 times and 25 times but for 30 times which is the count of max of a general game, it is good always. Moreover, although the Il Tempo rise was carried out in two steps, one step is sufficient or you may make it change more than a three-stage.

[0046] Moreover, the inside of a regular bonus game is carrying out the Il Tempo rise of the sound effect, if the counted value of the count count means 251 of an accessory game amounts to 8 times.

Furthermore, if the counted value of the count count means 251 of an accessory game amounts to 10 times, it is carrying out the II Tempo rise of the sound effect further. In addition, if the timing of the II Tempo rise is not only for 8 times and 10 times but for 12 times which is the count of max of an accessory game, it is good always. Moreover, although the II Tempo rise was carried out in two steps, one step is sufficient or you may make it change more than a three-stage.

(Flow chart) Below based on drawing 4 -7, actuation of the game control unit 20 shown in drawing 1 is explained. In addition, explanation is omitted about a part without the direct relation to the summary of this invention.

[0047] First, as shown in drawing 4 , in step 1, initialization of the system of the game control unit 20 shown in drawing 1 is performed. As shown in drawing 4 after system initialization, it progresses to step 2 from step 1, and initialization with the melody of a sound effect and a rhythm is performed. As shown in drawing 4 after initialization with a melody and a rhythm, it progresses to step 3 from step 2, the musical interval data for rhythms are read from the musical interval data storage means 304 for rhythms shown in drawing 3 , and it is set to the voice generating means 400 shown in drawing 1 .

[0048] As shown in drawing 4 after the set of the musical interval data for rhythms, it progresses to step 4 from step 3, and it is judged whether the sound effect selected the song. Consequently, when judged with having not selected a song, step 4 is repeated as shown in drawing 4 . On the other hand, when judged with having selected the song, as shown in drawing 4 , it progresses to step 5 from step 4, and song selection processing shown in drawing 6 is performed.

[0049] As shown in drawing 4 after song selection processing, it progresses to step 6 from step 5, and the melody data which selected the song are read into the voice generating means 400 shown in drawing 1 from the melody data storage means 301 shown in drawing 3 . As shown in drawing 4 after reading of melody data, it progresses to step 7 from step 6, and it is judged whether there are any key-on data memorized by the Keown data storage means 305 shown in drawing 3 .

[0050] Consequently, when judged with there being key-on data, as shown in drawing 4 , it progresses to step 8 from step 7, and Keown processing is performed. It progresses to step 9 from step 8 after the Keown processing. On the other hand, when judged with there being no key-on data, as shown in drawing 4 , it progresses to step 9 from step 7, and it is judged whether there are any musical instrument data memorized by the musical instrument data storage means 306 shown in drawing 3 .

[0051] Consequently, when judged with there being musical instrument data, as shown in drawing 4 , it progresses to step 10 from step 9, and musical instrument set processing is performed. It progresses to step 11 from step 10 after musical instrument set processing. On the other hand, when judged with there being no musical instrument data, as shown in drawing 4 and 5, it progresses to step 11 from step 9, and it is judged whether there are any timer data memorized by the timer data storage means 307 shown in drawing 3 .

[0052] Consequently, when judged with there being timer data, as shown in drawing 5 , it progresses to step 12 from step 11, and timer processing is performed. It progresses to step 13 from step 12 after timer processing. On the other hand, when judged with there being no timer data, as shown in drawing 5 , it progresses to step 13 from step 11, and it is judged whether there are any tone data memorized by the tone data storage means 308 shown in drawing 3 .

[0053] Consequently, when judged with there being tone data, as shown in drawing 5 , it progresses to step 14 from step 13, and tone processing is performed. It progresses to step 15 from step 14 after tone processing. On the other hand, when judged with there being no tone data, as shown in drawing 5 , it progresses to step 15 from step 13, and it is judged whether there are II Tempo data memorized by the II Tempo data storage means 302 shown in drawing 3 .

[0054] Consequently, when judged with there being II Tempo data, as shown in drawing 5 , it progresses to step 16 from step 15, and II Tempo processing shown in drawing 7 is performed. It progresses to step 17 from step 16 after the II Tempo processing. On the other hand, when judged with there being no II Tempo data, as shown in drawing 5 , it progresses to step 17 from step 15, and it is judged whether there are any key-off data memorized by the key-off data storage means 309 shown in drawing 3 .

[0055] Consequently, when judged with there being key-off data, as shown in drawing 5 , it progresses

to step 18 from step 17, and key-off processing is performed. It progresses to step 19 from step 18 after key off processing. On the other hand, when judged with there being no key-off data, as shown in drawing 5, it progresses to step 19 from step 17, and it is judged whether there are any repeat data memorized by the repeat data storage means 310 shown in drawing 3.

[0056] Consequently, when judged with there being repeat data, as shown in drawing 5, it progresses to step 20 from step 19, and repeat processing is performed. It progresses to step 21 from step 20 after repeat processing. On the other hand, when judged with there being no repeat data, as shown in drawing 5, it progresses to step 21 from step 19, and it is judged whether there are any end data memorized by the end data storage means 311 shown in drawing 3.

[0057] Consequently, when judged with there being end data, as shown in drawing 5, it progresses to step 22 from step 21, and processing is performed. On the other hand, when judged with there being no end data, as shown in drawing 4 and 5, it returns from step 21 to step 4.

(Song selection processing) Below, drawing 6 is used and the song selection processing shown in drawing 4 is explained further.

[0058] The above-mentioned song selection processing is processed by the song selection means 401 shown in drawing 1. First, it progresses to step 50 and the Il Tempo rise 1 or the Il Tempo rise 2 is judged. For example, if the counted value of the count count means 231 of a general game amounts to 20 times, it will be judged with the Il Tempo rise 1 by the inside of a big bonus game.

[0059] And if the counted value of the count count means 231 of a general game amounts to 25 times, it will be judged to be the Il Tempo rise 2. Moreover, if the counted value of the count count means 251 of an accessory game amounts to 8 times, it will be judged with the Il Tempo rise 1 by the inside of a regular bonus game. And if the counted value of the count count means 251 of an accessory game amounts to 10 times, it will be judged to be the Il Tempo rise 2.

[0060] When judged with there not being either the Il Tempo rise 1 or the Il Tempo rise 2 as a result of the judgment of the above-mentioned step 50, as shown in drawing 6, it progresses to the following step 51. And at step 51, the start address of the music data of the music which selected the song is set. On the other hand, when judged with there being either Il Tempo rise 1 or Il Tempo rise 2 as a result of the judgment of step 50, as shown in drawing 6, it progresses to the following step 52. And at step 52, the start address of the music data of the music the Il Tempo rise is carried out [music] is set.

(Il Tempo processing) Below, drawing 7 is used and the Il Tempo processing shown in drawing 5 is explained further.

[0061] The above-mentioned Il Tempo processing is processed by the Il Tempo modification means 402 shown in drawing 1. First, as shown in drawing 7, it progresses to step 160 and the Il Tempo data memorized by the Il Tempo data storage means 302 shown in drawing 3 are read. As shown in drawing 7 after read-out of the Il Tempo data, it progresses to step 161 from step 160, and the song selection data memorized by the song selection data storage means 303 shown in drawing 3 are read.

[0062] As shown in drawing 7 after read-out of song selection data, it progresses to step 162 from step 161, and it is judged whether it is the Il Tempo rise 1. Consequently, when judged with there being nothing by the Il Tempo rise 1, as shown in drawing 7, it progresses to step 163 from step 162, and then it is judged whether it is the Il Tempo rise 2.

[0063] On the other hand, when judged with there being nothing by the Il Tempo rise 2, as shown in drawing 7, it progresses to step 164 from step 163, and a performance rate is decided based on the Il Tempo data. For this reason, it is performed at original tempo. On the other hand, at previous step 162, when judged with it being by the Il Tempo rise 1, as shown in drawing 7, it progresses to step 165 from step 162, and the numeric value of the Il Tempo rise 1 is added to the Il Tempo data. The variation of a performance rate may be memorized to the data of the Il Tempo rise 1, or the performance rate itself is memorized to them, and the Il Tempo data may be transposed to the data of the Il Tempo rise 1. Then, it progresses to step 164 and a performance rate is decided based on the Il Tempo data with which the numeric value of the Il Tempo rise 1 was added. For this reason, from original tempo, the Il Tempo rise is carried out and it is performed.

[0064] Moreover, at previous step 163, when judged with it being by the Il Tempo rise 2, as shown in

drawing 7 , it progresses to step 166 from step 163, and the numeric value of the II Tempo rise 2 is added to the II Tempo data. Like the data of the II Tempo rise 1, the data of the II Tempo rise 2 may memorize the variation of a performance rate, or memorize the performance rate itself, and may transpose the II Tempo data to the data of the II Tempo rise 2. Then, it progresses to step 164 and a performance rate is decided based on the II Tempo data with which the numeric value of the II Tempo rise 2 was added. For this reason, from original tempo, the II Tempo rise is carried out, and moreover, as compared with the case of the II Tempo rise 1, the II Tempo rise is carried out further and it is performed.

[0065]

[Effect of the Invention] Since this invention is constituted as mentioned above, it does so effectiveness which is indicated below.

(Claim 1) According to invention according to claim 1, the following effectiveness is done so.

[0066] That is, according to invention according to claim 1, the melody of a sound effect and II Tempo are memorized separately, and only II Tempo can be changed with advance of a game. Therefore, by changing only the II Tempo data among music data, II Tempo of a sound effect can be changed and data volume can be decreased.

(Claim 2) According to invention according to claim 2, in addition to the above-mentioned effect of the invention according to claim 1, the following effectiveness is done so.

[0067] That is, according to invention according to claim 2, II Tempo of a sound effect can be specially changed with advance of a game. For this reason, presence can be specially improved with advance of a game.

(Claim 3) According to invention according to claim 3, in addition to the above-mentioned effect of the invention according to claim 2, the following effectiveness is done so.

[0068] That is, according to invention according to claim 3, the II Tempo rise of the sound effect can be carried out because the count of the general game in a big bonus game progresses. For this reason, presence can be gradually heaped up as a big bonus game approaches in the end. Moreover, since a game person understands that a big bonus game approaches in the end, a game person's feeling of impatience can be instigated.

(Claim 4) According to invention according to claim 4, in addition to the above-mentioned effect of the invention according to claim 2 or 3, the following effectiveness is done so.

[0069] That is, according to invention according to claim 4, the II Tempo rise of the sound effect can be carried out because the count of the general game in a regular bonus game progresses. For this reason, presence can be gradually heaped up as a regular bonus game approaches in the end. Moreover, since a game person understands that a regular bonus game approaches in the end, a game person's feeling of impatience can be instigated.

[Translation done.]

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TECHNICAL FIELD

[Field of the Invention] This invention enables it to change Il Tempo of a sound effect especially with advance of a game about a slot machine.

[Translation done.]

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PRIOR ART

[Description of the Prior Art] Conventionally, the music data of a sound effect were memorized on this kind of slot machine. A melody and II Tempo were memorized in one by the above-mentioned conventional music data.

[Translation done.]

JAPANESE [JP,11-216221,A]

CLAIMS DETAILED DESCRIPTION TECHNICAL FIELD PRIOR ART EFFECT OF THE
INVENTION TECHNICAL PROBLEM MEANS DESCRIPTION OF DRAWINGS DRAWINGS

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EFFECT OF THE INVENTION

[Effect of the Invention] Since this invention is constituted as mentioned above, it does so effectiveness which is indicated below.

(Claim 1) According to invention according to claim 1, the following effectiveness is done so.

[0066] That is, according to invention according to claim 1, the melody of a sound effect and II Tempo are memorized separately, and only II Tempo can be changed with advance of a game. Therefore, by changing only the II Tempo data among music data, II Tempo of a sound effect can be changed and data volume can be decreased.

(Claim 2) According to invention according to claim 2, in addition to the above-mentioned effect of the invention according to claim 1, the following effectiveness is done so.

[0067] That is, according to invention according to claim 2, II Tempo of a sound effect can be specially changed with advance of a game. For this reason, presence can be specially improved with advance of a game.

(Claim 3) According to invention according to claim 3, in addition to the above-mentioned effect of the invention according to claim 2, the following effectiveness is done so.

[0068] That is, according to invention according to claim 3, the II Tempo rise of the sound effect can be carried out because the count of the general game in a big bonus game progresses. For this reason, presence can be gradually heaped up as a big bonus game approaches in the end. Moreover, since a game person understands that a big bonus game approaches in the end, a game person's feeling of impatience can be instigated.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, by the above-mentioned conventional music data, when it is going to change II Tempo of a sound effect, two or more music data with which II Tempo differs must be prepared, and there is a trouble that data volume will increase. Then, the place which each invention indicated by each claim, respectively is made in view of the trouble which the above-mentioned Prior art has, and is made into the purpose is in the following point.

(Claim 1) That is, invention according to claim 1 memorizes the melody of music data, and II Tempo separately, and enables it to change only II Tempo with advance of a game.

[0004] Therefore, by changing only the II Tempo data among music data, II Tempo of a sound effect can be changed and data volume can be decreased.

(Claim 2) In addition to the purpose of the above-mentioned invention according to claim 1, invention according to claim 2 aims at the following point.

[0005] That is, invention according to claim 2 enables it to change II Tempo of a sound effect with advance of a game specially. For this reason, presence can be specially improved with advance of a game.

(Claim 3) In addition to the purpose of the above-mentioned invention according to claim 2, invention according to claim 3 aims at the following point.

[0006] That is, invention according to claim 3 enables it to carry out the II Tempo rise of the sound effect because the count of the general game in a big bonus game progresses. For this reason, presence can be gradually heaped up as a big bonus game approaches in the end. Moreover, since a game person understands that a big bonus game approaches in the end, a game person's feeling of impatience can be instigated.

(Claim 4) In addition to the purpose of the above-mentioned invention according to claim 2 or 3, invention according to claim 4 aims at the following point.

[0007] That is, invention according to claim 4 enables it to carry out the II Tempo rise of the sound effect because the count of the general game in a regular bonus game progresses. For this reason, presence can be gradually heaped up as a regular bonus game approaches in the end.

[0008] Moreover, since a game person understands that a regular bonus game approaches in the end, a game person's feeling of impatience can be instigated.

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TECHNICAL PROBLEM

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(Claim 1) That is, invention according to claim 1 memorizes the melody of music data, and II Tempo separately, and enables it to change only II Tempo with advance of a game.

[0004] Therefore, by changing only the II Tempo data among music data, II Tempo of a sound effect can be changed and data volume can be decreased.

(Claim 2) In addition to the purpose of the above-mentioned invention according to claim 1, invention according to claim 2 aims at the following point.

[0005] That is, invention according to claim 2 enables it to change II Tempo of a sound effect with advance of a game specially. For this reason, presence can be specially improved with advance of a game.

(Claim 3) In addition to the purpose of the above-mentioned invention according to claim 2, invention according to claim 3 aims at the following point.

[0006] That is, invention according to claim 3 enables it to carry out the II Tempo rise of the sound effect because the count of the general game in a big bonus game progresses. For this reason, presence can be gradually heaped up as a big bonus game approaches in the end. Moreover, since a game person understands that a big bonus game approaches in the end, a game person's feeling of impatience can be instigated.

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[0007] That is, invention according to claim 4 enables it to carry out the II Tempo rise of the sound effect because the count of the general game in a regular bonus game progresses. For this reason, presence can be gradually heaped up as a regular bonus game approaches in the end.

[0008] Moreover, since a game person understands that a regular bonus game approaches in the end, a game person's feeling of impatience can be instigated.

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MEANS

[Means for Solving the Problem] (Focus) Each invention indicated by each claim, respectively is made in order to attain each above-mentioned purpose, and it explains the focus of each invention below using the gestalt of implementation of invention shown in the drawing.

[0010] In addition, the sign in a parenthesis shows the sign used in the gestalt of implementation of invention, and does not limit the technical range of this invention. Moreover, a drawing number also shows the drawing number used in the gestalt of implementation of invention, and does not limit the technical range of this invention.

(Claim 1) Invention according to claim 1 is characterized by the following two points.

[0011] As shown in a music data storage means (300) at drawing 3, the following means (301,302) is included in the 1st.

(1) A melody data storage means (301) melody data storage means (301) is for memorizing the melody data of a sound effect.

[0012] (2) The II Tempo data storage means (302) II Tempo data storage means (302) is for memorizing the II Tempo data of a sound effect. As shown in a sound effect generating means (400) at drawing 1, the following means (402) is included in the 2nd.

[0013] (1) An II Tempo modification means (402) II Tempo modification means (402) is for adding modification to the II Tempo data memorized by the II Tempo data storage means (302) with advance of a game, and changing II Tempo of a sound effect.

(Claim 2) In addition to the focus of the above-mentioned invention according to claim 1, invention according to claim 2 is characterized by the following three points.

[0014] As shown in drawing 1, the following means (100,200) is included [1st] in the slot machine.

(1) A general game control means (100) general game control means (100) is for making a general game perform.

(2) specially -- a game control means (200) -- it is for making a game control means (200) start the high special game of a winning-a-prize probability from a general game by having attained predetermined conditions in the general game performed by the general game control means (100) specially, and making the specific game of a predetermined count perform into the special game concerned.

[0015] Specially, as shown in a game control means (200) at drawing 2, the following means (230,250) is included in the 2nd.

(1) It is for counting the count of the specific game in a game specially for the count count means (230,250) of the count count means (230,250) specification game of a specific game.

[0016] the II Tempo data memorized by the II Tempo data storage means (302) the 3rd based on the counted value which counted the II Tempo modification means (402) for the count count means (230,250) of a specific game -- modification -- in addition, he is trying to change II Tempo of a sound effect

(Claim 3) In addition to the focus of the above-mentioned invention according to claim 2, invention according to claim 3 is characterized by the following two points.

[0017] The count of the specific game counted with the count count means (230) of a specific game to

the 1st is a count of the general game in a big bonus game. He is trying to change an II Tempo modification means (402) to the 2nd so that the count of the general game in a big bonus game may carry out the II Tempo rise of the sound effect, on condition that the count of termination of a predetermined count is approached.

(Claim 4) In addition to the focus of the above-mentioned invention according to claim 2 or 3, invention according to claim 4 is characterized by the following two points.

[0018] The count of the specific game counted with the count count means (250) of a specific game to the 1st is a count of the accessory game for competing for success in an election and un-winning. [of the specific accessory in a regular bonus game] He is trying to change an II Tempo modification means (402) to the 2nd so that the count of the accessory game in a regular bonus game may carry out the II Tempo rise of the sound effect, on condition that the count of termination of a predetermined count is approached.

[0019]

[Embodiment of the Invention] (Explanation of a drawing) Drawing 1 -7 show an example of the gestalt of operation of this invention. Drawing 1 -3 show the block diagram of a slot machine, respectively, and drawing 1 shows the block diagram in which a block diagram and drawing 2 show the block diagram of drawing 1 showing the detail of a game control means specially, and drawing 3 shows the detail of the music data storage means of drawing 1 , respectively.

[0020] Drawing 4 -7 show the flow chart for explaining actuation of a slot machine, respectively, and a flow chart for the flow chart with which drawing 4 follows the Main flow chart and drawing 5 follows B of drawing 4 , and drawing 6 to explain song selection processing of drawing 4 , and drawing 7 show the flow chart for explaining rhythm processing of drawing 5 , respectively.

(Slot machine) Ten show a slot machine among a Fig.

[0021] The above-mentioned slot machine 10 is constituted centering on the game control unit 20, as shown in drawing 1 . Although the above-mentioned game control unit 20 is not illustrated, it is having been constituted focusing on CPU, having ROM, RAM, I/O, etc., and reading the program memorized by ROM, and functions as various kinds of means 100-402 to mention later.

(Input stage) As shown in drawing 1 , the following switches 30-40 are connected to the input stage of said game control device 20.

[0022] (1) Although the start switch 30 start switch 30 is not illustrated, it is for making a game start, on condition that an injection of a medal. Although it will not specifically illustrate if the start switch 30 is operated, rotations of three reels are started all at once two or more. In addition, an injection of a medal actually throws in a game medal, and also it throws in the credit medal by which the credit was carried out into the slot machine 10, or replaces it with a medal, reads the information on cards magnetically or optically, and is good as a start condition of a game.

[0023] Although not illustrated, two or more patterns are displayed on each three above-mentioned reel, respectively.

(2) Although the stop switch 40 stop switch 40 is not illustrated, it is formed three pieces respectively corresponding to three reels, and stops rotation of each reel concerned. If one stop switch 40 is operated among three stop switches 40, specifically, rotation of the one corresponding reel concerned will stop. And actuation of all three stop switches 40 stops all of rotation of three reels.

(Output stage) As shown in drawing 1 , the following components 50-70 are connected to the output stage of said game control unit 20.

[0024] (1) The reel unit 50 reel unit 50 rotates and stops three reels according to an individual. Although the reel unit 50 does not illustrate, specifically, it consists of a motor respectively corresponding to three reels, for example, three stepping motors, those drive circuits, etc.

[0025] And if the start switch 30 is operated on condition that an injection of a medal, the drive of three motors will be started and rotation of three reels will be started. Next, if one of three stop switches 40 is operated, the drive of one corresponding motor will be stopped and the reel concerned will stop.

Furthermore, if all three stop switches 40 are operated, the drive of all three motors will be stopped and all three reels will be suspended.

[0026] (2) The hopper unit 60 hopper unit 60 pays out a game person a medal based on the result of a game. In addition, without paying out a medal for every game, in a slot machine 10, the credit of the medal is carried out, or it is replaced with expenditure of a medal, and you may make it memorize magnetically or optically on cards the information which corresponds in the number of sheets of a medal.

[0027] (3) Loudspeaker 70 loudspeaker 70 generates a sound effect.

(Game control unit 20) The game control unit 20 includes the following means 100-400, as shown in drawing 1.

(1) General game control means 100 (2) special game control means 200 (3) The music data storage means 300 (4) sound-effect generating means 400 (general game control means 100) general game control means 100 is a means for making a general game perform.

(Specially game control means 200) The game control means 200 is by having attained predetermined conditions in the general game performed by the general game control means 100 for making the high special game of a winning-a-prize probability start, and making the specific game of a predetermined count perform into the special game concerned from a general game specially.

[0028] When it divides roughly, there are a big bonus game and a regular bonus game in the above-mentioned special game. Although the above-mentioned regular bonus game is not illustrated in a general game or a big bonus game, if three regular bonus patterns, for example, the pattern of a "bar", gather on effective Rhine, it will be started and the medal of 15 sheets will pay it out by the hopper unit 60 at this time.

[0029] Initiation of a regular bonus game starts the accessory game which used for three Replay patterns to gather, for example as the accessory and which competes for success in an election and un-winning.

[of an accessory] The count of max of an accessory game is set as 12 times. If for example, three replay patterns gather in the 12 above-mentioned times of accessory games, it will be success in an election of an accessory, and the medal of 15 sheets will pay out by the hopper unit 60.

[0030] The count of max of success in an election of the above-mentioned accessory is set as 8 times.

On the other hand, although a big bonus game is not illustrated in a general game, if three big bonus patterns, for example, the pattern of "7", gather on effective Rhine, it will be started and the medal of 15 sheets will pay it out by the hopper unit 60 at this time. If a regular bonus game is started, a general game is started and the count of max of a general game is set as 30 times.

[0031] The regular bonus game previously explained that three replay patterns gather among 30 times in a big bonus game of general games is started, and the medal of five sheets pays out by the hopper unit 60 at this time. The count of max of the regular bonus game in a big bonus game is set as 3 times.

[0032] On the other hand, if the above-mentioned special game control means 200 is divided roughly as shown in drawing 2, it includes the big bonus control means 210 and the regular bonus control means 220.

(Big bonus control means 210) The above-mentioned big bonus control means 210 is for controlling the big bonus game as a game specially, as explained previously.

[0033] And if the big bonus control means 210 is divided roughly as shown in drawing 2, it includes the count count means 230 of a specific game, and RB winning-a-prize probability setting means 240. If the above-mentioned count count means 230 of a specific game is divided roughly as shown in drawing 2, it includes the count count means 231 of a general game, and the count count means 232 of RB winning a prize. The above-mentioned count count means 231 of a general game is for counting the count of the general game as a specific game in a big bonus game, and has set the count of max as 20 times.

[0034] Said count count means 232 of RB winning a prize is for counting the count of the regular bonus game in a big bonus game, and has set the count of max as 3 times. Said RB winning-a-prize probability setting means 240 is for changing the winning-a-prize probability of the regular bonus in a big bonus game into a low probability.

(Regular bonus control means 220) On the other hand, the regular bonus control means 220 is for controlling the regular bonus game as a game specially, as explained previously.

[0035] If the regular bonus control means 220 is divided roughly as shown in drawing 2, it includes the

count count means 250 of a specific game, and the accessory success-in-an-election probability setting means 260. If the above-mentioned count count means 250 of a specific game is divided roughly as shown in drawing 2, it includes the count count means 251 of an accessory game, and the count count means 252 of accessory success in an election. The above-mentioned count count means 251 of an accessory game is for counting the count of the accessory game as a specific game in a regular bonus game, and has set the count of max as 12 times.

[0036] Said count count means 252 of accessory success in an election is for counting the count of success in an election of the accessory in a regular bonus game, and has set the count of max as 8 times. Said accessory success-in-an-election probability setting means 260 is for changing the success-in-an-election probability of the accessory in a regular bonus game into a low probability.

(Music data storage means 300) Said music data storage means 300 is for memorizing the music data for generating a sound effect.

[0037] As shown in drawing 3, the following storage means 301-311 are included in said music data storage means 300.

(1) The melody data storage means 301 melody data storage means 301 is for memorizing the melody data for specifying the melody of a sound effect, and two or more kinds of melody data are memorized.

[0038] (2) The Il Tempo data storage means 302 Il Tempo data storage means 302 is for memorizing the Il Tempo data for specifying Il Tempo of a sound effect, and two or more kinds of Il Tempo data with which rates differed are memorized.

(3) The song selection data storage means 303 song-selection data storage means 303 is for memorizing the song selection data for selecting a song in one melody data in all to advance of a game from two or more kinds of melody data memorized by the melody data storage means 301.

[0039] (4) The musical interval data storage means 304 for musical interval data storage means 304 rhythms for rhythms is for memorizing the musical interval data for rhythms for specifying the musical interval for rhythms at the time of playback of the melody data which selected the song.

(5) The Keown data storage means 305 Keown data storage means 305 is for memorizing the key-on data for specifying the timing at the time of playback of the melody data which selected the song which acts as Keown.

[0040] (6) The musical instrument data storage means 306 musical-instrument data storage means 306 is for memorizing the musical instrument data for specifying the musical instrument at the time of playback of the melody data which selected the song.

(7) The timer data storage means 307 timer data storage means 307 is for memorizing the timer data for specifying the playback time amount of the melody data which selected the song.

[0041] (8) The tone data storage means 308 tone data storage means 308 is for memorizing the tone data for specifying the tone at the time of playback of the melody data which selected the song.

(9) The key off data storage means 309 key off data storage means 309 is for memorizing the key off data for specifying the timing at the time of playback of the melody data which selected the song which carries out key-off.

[0042] (10) The repeat data storage means 310 repeat data storage means 310 is for memorizing the repeat data for specifying the repeat at the time of playback of the melody data which selected the song.

(11) And the data storage means 311 and the data storage means 311 are for memorizing data, in order to specify the time of termination of playback of the melody data which selected the song.

(Sound effect generating means 400) Said sound effect generating means 400 is for reading the various data memorized by the music data storage means 300, and generating a sound effect through a loudspeaker 70.

[0043] The sound effect generating means 400 includes the song selection means 401 and the Il Tempo modification means 402, as shown in drawing 1. The above-mentioned song selection means 401 is for selecting a song in one melody data in all to advance of a game, reproducing the melody data concerned which selected the song, and making it generate as a sound effect through a loudspeaker 70 based on the song selection data memorized by the song selection data storage means 303 from two or more kinds of melody data memorized by the melody data storage means 301.

[0044] Said II Tempo modification means 402 is for changing II Tempo at the time of playback of the melody data which added modification and selected the song with advance of a game to the II Tempo data memorized by the II Tempo data storage means 302. With the gestalt of this operation, II Tempo of those sound effects is changed in the special game of a big bonus game or a regular bonus game.

[0045] For example, the inside of a big bonus game is carrying out the II Tempo rise of the sound effect, if the counted value of the count count means 231 of a general game amounts to 20 times. Furthermore, if the counted value of the count count means 231 of a general game amounts to 25 times, it is carrying out the II Tempo rise of the sound effect further. In addition, if the timing of the II Tempo rise is not only for 20 times and 25 times but for 30 times which is the count of max of a general game, it is good always. Moreover, although the II Tempo rise was carried out in two steps, one step is sufficient or you may make it change more than a three-stage.

[0046] Moreover, the inside of a regular bonus game is carrying out the II Tempo rise of the sound effect, if the counted value of the count count means 251 of an accessory game amounts to 8 times. Furthermore, if the counted value of the count count means 251 of an accessory game amounts to 10 times, it is carrying out the II Tempo rise of the sound effect further. In addition, if the timing of the II Tempo rise is not only for 8 times and 10 times but for 12 times which is the count of max of an accessory game, it is good always. Moreover, although the II Tempo rise was carried out in two steps, one step is sufficient or you may make it change more than a three-stage.

(Flow chart) Below based on drawing 4 -7, actuation of the game control unit 20 shown in drawing 1 is explained. In addition, explanation is omitted about a part without the direct relation to the summary of this invention.

[0047] First, as shown in drawing 4, in step 1, initialization of the system of the game control unit 20 shown in drawing 1 is performed. As shown in drawing 4 after system initialization, it progresses to step 2 from step 1, and initialization with the melody of a sound effect and a rhythm is performed. As shown in drawing 4 after initialization with a melody and a rhythm, it progresses to step 3 from step 2, the musical interval data for rhythms are read from the musical interval data storage means 304 for rhythms shown in drawing 3, and it is set to the voice generating means 400 shown in drawing 1.

[0048] As shown in drawing 4 after the set of the musical interval data for rhythms, it progresses to step 4 from step 3, and it is judged whether the sound effect selected the song. Consequently, when judged with having not selected a song, step 4 is repeated as shown in drawing 4. On the other hand, when judged with having selected the song, as shown in drawing 4, it progresses to step 5 from step 4, and song selection processing shown in drawing 6 is performed.

[0049] As shown in drawing 4 after song selection processing, it progresses to step 6 from step 5, and the melody data which selected the song are read into the voice generating means 400 shown in drawing 1 from the melody data storage means 301 shown in drawing 3. As shown in drawing 4 after reading of melody data, it progresses to step 7 from step 6, and it is judged whether there are any key-on data memorized by the Keown data storage means 305 shown in drawing 3.

[0050] Consequently, when judged with there being key-on data, as shown in drawing 4, it progresses to step 8 from step 7, and Keown processing is performed. It progresses to step 9 from step 8 after the Keown processing. On the other hand, when judged with there being no key-on data, as shown in drawing 4, it progresses to step 9 from step 7, and it is judged whether there are any musical instrument data memorized by the musical instrument data storage means 306 shown in drawing 3.

[0051] Consequently, when judged with there being musical instrument data, as shown in drawing 4, it progresses to step 10 from step 9, and musical instrument set processing is performed. It progresses to step 11 from step 10 after musical instrument set processing. On the other hand, when judged with there being no musical instrument data, as shown in drawing 4 and 5, it progresses to step 11 from step 9, and it is judged whether there are any timer data memorized by the timer data storage means 307 shown in drawing 3.

[0052] Consequently, when judged with there being timer data, as shown in drawing 5, it progresses to step 12 from step 11, and timer processing is performed. It progresses to step 13 from step 12 after timer processing. On the other hand, when judged with there being no timer data, as shown in drawing 5, it

progresses to step 13 from step 11, and it is judged whether there are any tone data memorized by the tone data storage means 308 shown in drawing 3 .

[0053] Consequently, when judged with there being tone data, as shown in drawing 5 , it progresses to step 14 from step 13, and tone processing is performed. It progresses to step 15 from step 14 after tone processing. On the other hand, when judged with there being no tone data, as shown in drawing 5 , it progresses to step 15 from step 13, and it is judged whether there are Il Tempo data memorized by the Il Tempo data storage means 302 shown in drawing 3 .

[0054] Consequently, when judged with there being Il Tempo data, as shown in drawing 5 , it progresses to step 16 from step 15, and Il Tempo processing shown in drawing 7 is performed. It progresses to step 17 from step 16 after the Il Tempo processing. On the other hand, when judged with there being no Il Tempo data, as shown in drawing 5 , it progresses to step 17 from step 15, and it is judged whether there are any key-off data memorized by the key-off data storage means 309 shown in drawing 3 .

[0055] Consequently, when judged with there being key-off data, as shown in drawing 5 , it progresses to step 18 from step 17, and key-off processing is performed. It progresses to step 19 from step 18 after key off processing. On the other hand, when judged with there being no key-off data, as shown in drawing 5 , it progresses to step 19 from step 17, and it is judged whether there are any repeat data memorized by the repeat data storage means 310 shown in drawing 3 .

[0056] Consequently, when judged with there being repeat data, as shown in drawing 5 , it progresses to step 20 from step 19, and repeat processing is performed. It progresses to step 21 from step 20 after repeat processing. On the other hand, when judged with there being no repeat data, as shown in drawing 5 , it progresses to step 21 from step 19, and it is judged whether there are any end data memorized by the end data storage means 311 shown in drawing 3 .

[0057] Consequently, when judged with there being end data, as shown in drawing 5 , it progresses to step 22 from step 21, and processing is performed. On the other hand, when judged with there being no end data, as shown in drawing 4 and 5, it returns from step 21 to step 4.

(Song selection processing) Below, drawing 6 is used and the song selection processing shown in drawing 4 is explained further.

[0058] The above-mentioned song selection processing is processed by the song selection means 401 shown in drawing 1 . First, it progresses to step 50 and the Il Tempo rise 1 or the Il Tempo rise 2 is judged. For example, if the counted value of the count count means 231 of a general game amounts to 20 times, it will be judged with the Il Tempo rise 1 by the inside of a big bonus game.

[0059] And if the counted value of the count count means 231 of a general game amounts to 25 times, it will be judged to be the Il Tempo rise 2. Moreover, if the counted value of the count count means 251 of an accessory game amounts to 8 times, it will be judged with the Il Tempo rise 1 by the inside of a regular bonus game. And if the counted value of the count count means 251 of an accessory game amounts to 10 times, it will be judged to be the Il Tempo rise 2.

[0060] When judged with there not being either the Il Tempo rise 1 or the Il Tempo rise 2 as a result of the judgment of the above-mentioned step 50, as shown in drawing 6 , it progresses to the following step 51. And at step 51, the start address of the music data of the music which selected the song is set. On the other hand, when judged with there being either Il Tempo rise 1 or Il Tempo rise 2 as a result of the judgment of step 50, as shown in drawing 6 , it progresses to the following step 52. And at step 52, the start address of the music data of the music the Il Tempo rise is carried out [music] is set.

(Il Tempo processing) Below, drawing 7 is used and the Il Tempo processing shown in drawing 5 is explained further.

[0061] The above-mentioned Il Tempo processing is processed by the Il Tempo modification means 402 shown in drawing 1 . First, as shown in drawing 7 , it progresses to step 160 and the Il Tempo data memorized by the Il Tempo data storage means 302 shown in drawing 3 are read. As shown in drawing 7 after read-out of the Il Tempo data, it progresses to step 161 from step 160, and the song selection data memorized by the song selection data storage means 303 shown in drawing 3 are read.

[0062] As shown in drawing 7 after read-out of song selection data, it progresses to step 162 from step 161, and it is judged whether it is the Il Tempo rise 1. Consequently, when judged with there being

nothing by the II Tempo rise 1, as shown in drawing 7 , it progresses to step 163 from step 162, and then it is judged whether it is the II Tempo rise 2.

[0063] On the other hand, when judged with there being nothing by the II Tempo rise 2, as shown in drawing 7 , it progresses to step 164 from step 163, and a performance rate is decided based on the II Tempo data. For this reason, it is performed at original tempo. On the other hand, at previous step 162, when judged with it being by the II Tempo rise 1, as shown in drawing 7 , it progresses to step 165 from step 162, and the numeric value of the II Tempo rise 1 is added to the II Tempo data. The variation of a performance rate may be memorized to the data of the II Tempo rise 1, or the performance rate itself is memorized to them, and the II Tempo data may be transposed to the data of the II Tempo rise 1. Then, it progresses to step 164 and a performance rate is decided based on the II Tempo data with which the numeric value of the II Tempo rise 1 was added. For this reason, from original tempo, the II Tempo rise is carried out and it is performed.

[0064] Moreover, at previous step 163, when judged with it being by the II Tempo rise 2, as shown in drawing 7 , it progresses to step 166 from step 163, and the numeric value of the II Tempo rise 2 is added to the II Tempo data. Like the data of the II Tempo rise 1, the data of the II Tempo rise 2 may memorize the variation of a performance rate, or memorize the performance rate itself, and may transpose the II Tempo data to the data of the II Tempo rise 2. Then, it progresses to step 164 and a performance rate is decided based on the II Tempo data with which the numeric value of the II Tempo rise 2 was added. For this reason, from original tempo, the II Tempo rise is carried out, and moreover, as compared with the case of the II Tempo rise 1, the II Tempo rise is carried out further and it is performed.

[Translation done.]

* NOTICES *

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram of a slot machine.

[Drawing 2] It is the block diagram of drawing 1 showing the detail of a game control means specially.

[Drawing 3] It is the block diagram showing the detail of the music data storage means of drawing 1.

[Drawing 4] It is a flow chart for explaining actuation of a slot machine.

[Drawing 5] It is a flow chart following B of drawing 4.

[Drawing 6] It is a flow chart for explaining song selection processing of drawing 4.

[Drawing 7] It is a flow chart for explaining rhythm processing of drawing 5.

[Description of Notations]

10 Slot Machine 20 Game Control Unit

30 Start Switch 40 Stop Switch

50 Reel Unit 60 Hopper Unit

70 Loudspeaker 100 General Game Control Means

200 It is Game Control Means Specially. 210 Big Bonus Control Means

220 Regular Bonus Control Means 230 Count Count Means of Specific Game

231 Count Count Means of General Game 232 Count Count Means of RB Winning a Prize

240 RB Winning-a-Prize Probability Setting Means 250 Count Count Means of Specific Game

251 Count Count Means of Accessory Game 252 Count Count Means of Accessory Success in an Election

260 Accessory Success-in-an-Election Probability Setting Means 300 Music Data Storage Means

301 Melody Data Storage Means 302 II Tempo Data Storage Means

303 Song Selection Data Storage Means 304 Musical Interval Data Storage Means for Rhythms

305 Keown Data Storage Means 306 Musical Instrument Data Storage Means

307 Timer Data Storage Means 308 Tone Data Storage Means

309 Key Off Data Storage Means 310 Repeat Data Storage Means

311 And Data Storage Means 400 Sound Effect Generating Means

401 Song Selection Means 402 II Tempo Modification Means

[Translation done.]

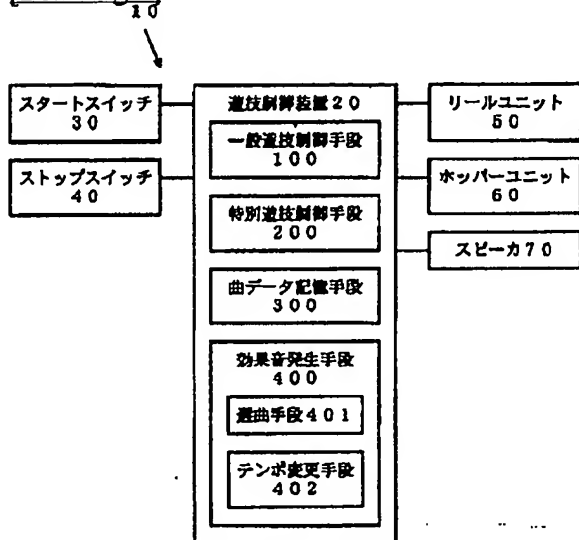
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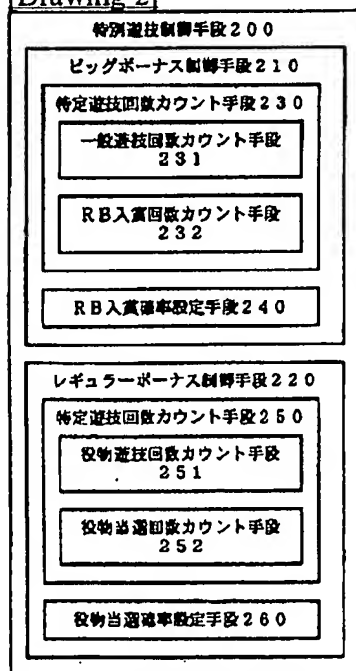
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DRAWINGS

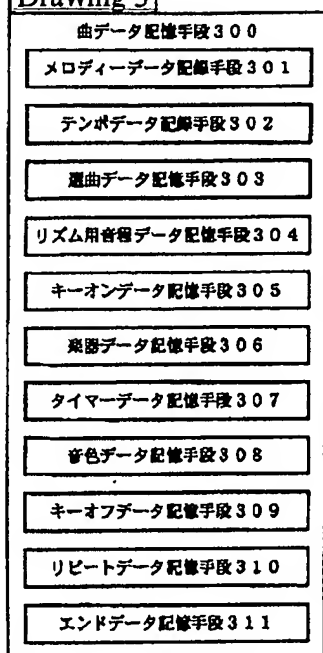
[Drawing 1]



[Drawing 2]

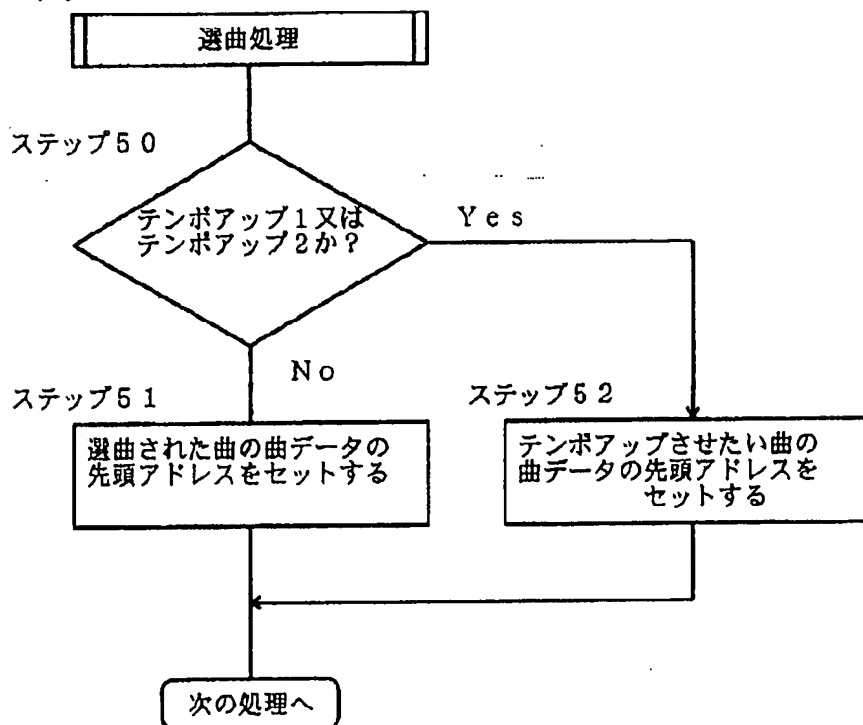


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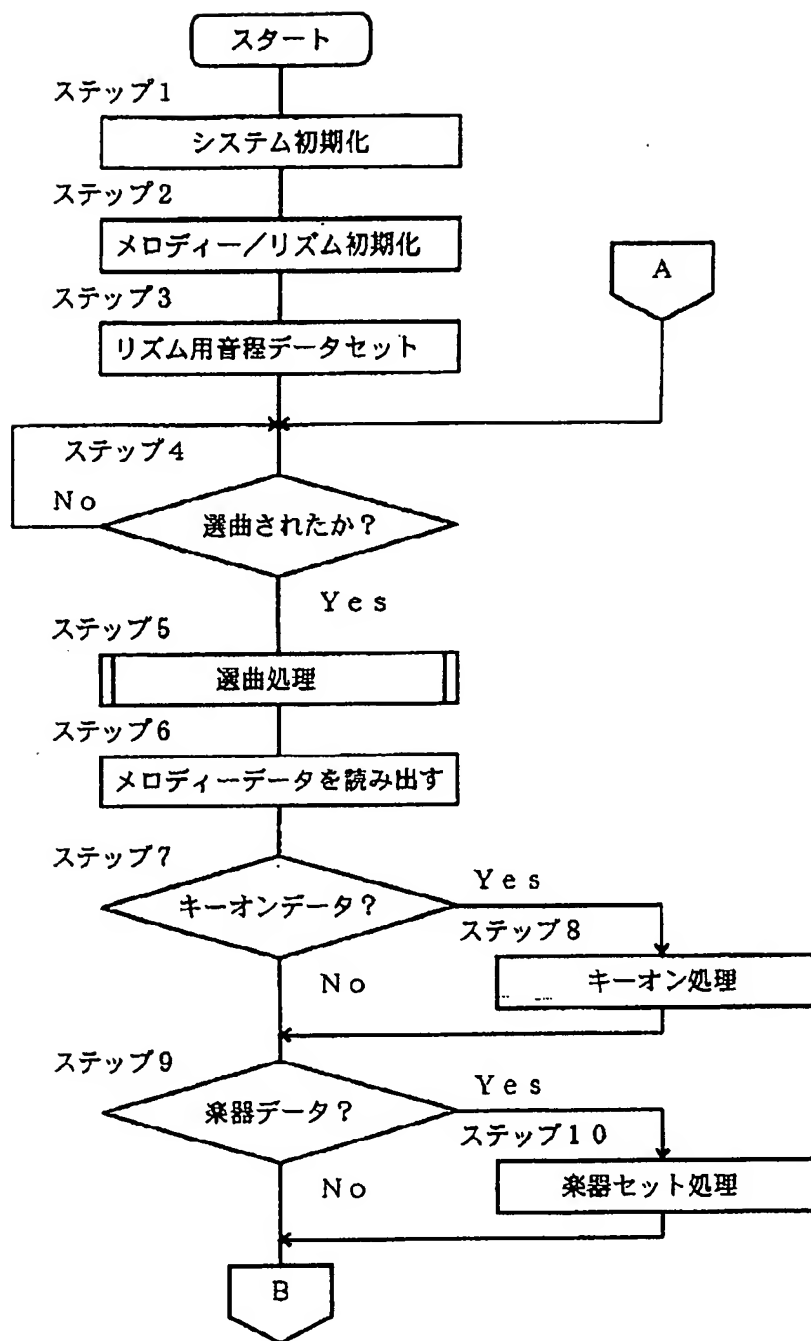


[Drawing 6]

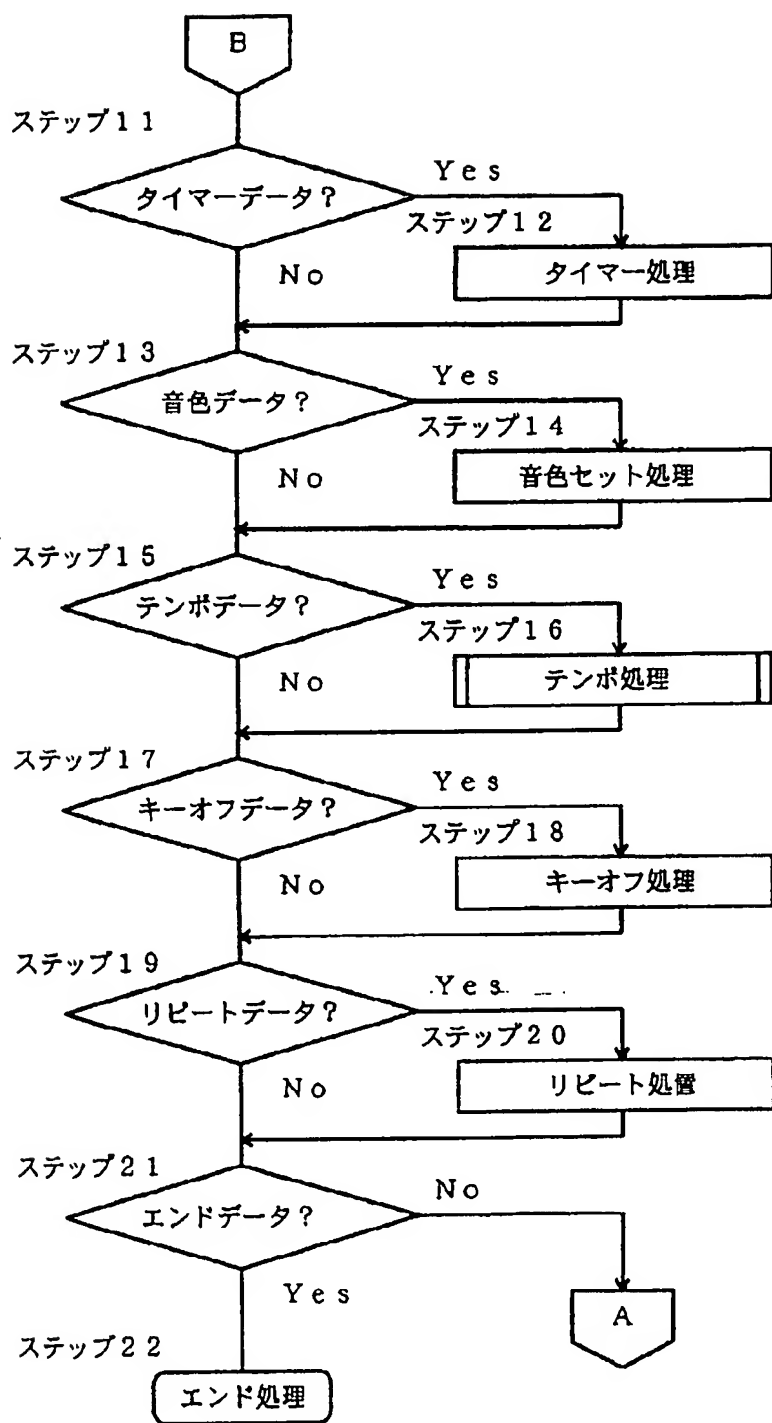
ステップ5



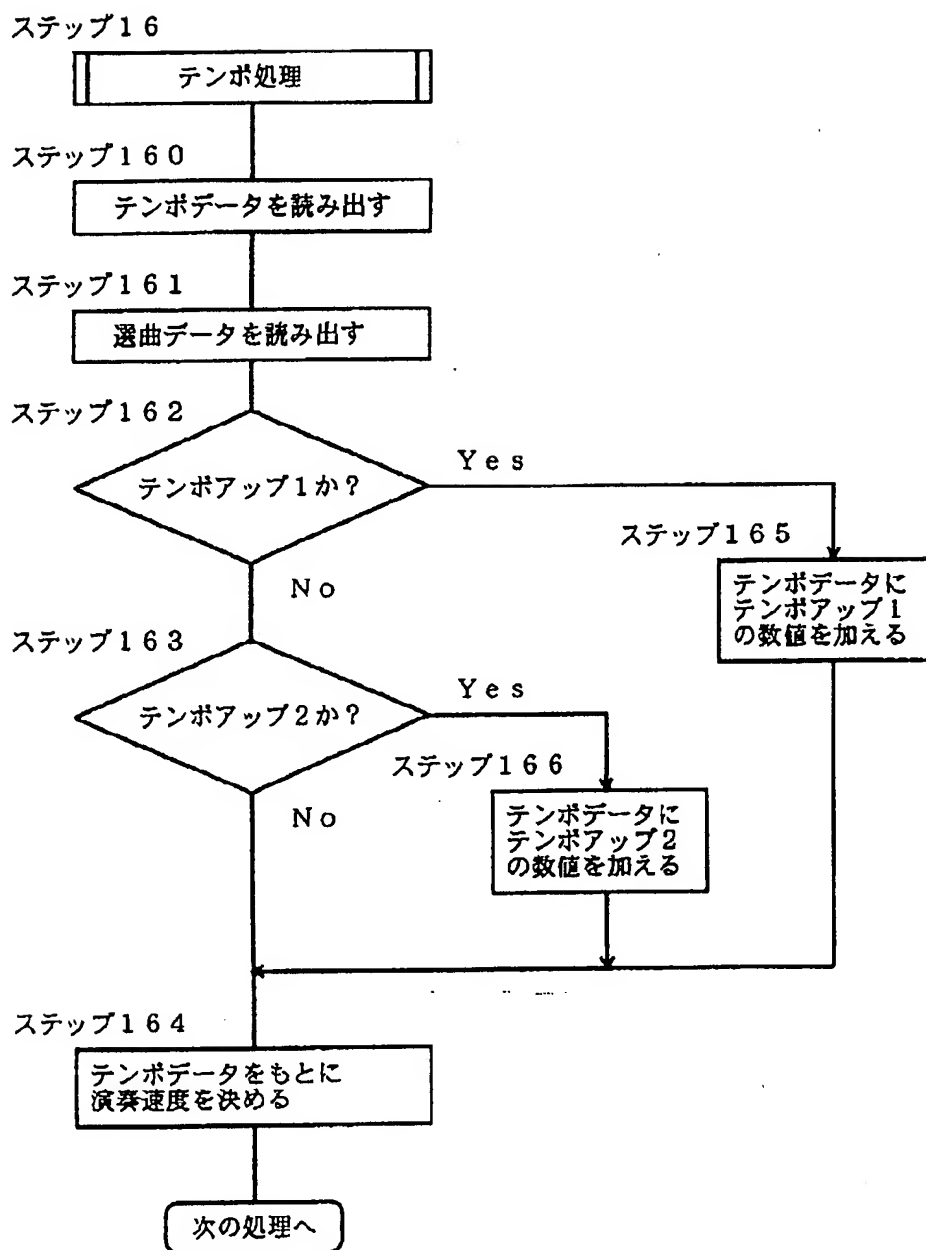
[Drawing 4]



[Drawing 5]



[Drawing 7]



[Translation done.]